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ABSTRACT

New approaches to teaching and learning are common, but nothing will change unless these ideas are brought to the frontlines of the classroom. Facing the challenge to incorporate varied innovative teaching and learning strategies, set statewide and schoolwide goals, and implement standards, schools need a systematic, consistent framework and high technology tool to bring these ideas to the classroom. In 1992, Wisconsin's 2-year college system formed a partnership to develop a high technology instructional design software package and video course that would arm them and Wisconsin school districts for the challenges ahead. The resulting system works for teachers, administrators, and learners. It integrates current theory and practice in instruction into a model that infuses broad, transferable skills into occupational and discipline specific instruction. The Wisconsin Technical College System Foundation created software for developing and planning programs, courses, or lessons from scratch or from broad frameworks developed at the national, state, or district levels. It can create study guides and training manuals that include components of the model. Since the release of the Wisconsin Model Academic Standards in 1997, over 250 K-12 school districts have used the model and software to show how they address standards. The Instructional Design and Planning video course leads viewers through a step-by-step process for developing performance-based criteria, study guides, lesson plans, and teacher manuals. (SM)

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Technology in the Trenches: Using Standards to Improve the Quality of Instruction

Robin Soine

Abstract: New approaches to teaching and learning are everywhere today, but nothing will change unless these ideas are brought to the frontlines of the classroom. Faced with the challenge to incorporate varied innovative teaching and learning strategies, set statewide and schoolwide goals, and implement standards, schools today need a systematic and consistent framework *and high technology tool* to bring these ideas to the classroom.

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Technology in the Trenches: Using Standards to Improve the Quality of Instruction

An idea. A tool. A change. Improvement. Educators today are bombarded with new approaches to teaching and learning, but one thing seems clear: nothing will change unless these ideas are brought to the frontlines of the classroom. We can talk about providing students with world-class skills, 21st century schools, and combining technology and pedagogy, but if none of these are done in the trenches our efforts are wasted and human scrap results.

How can schools today incorporate varied innovative teaching and learning strategies, set statewide and schoolwide goals, or implement standards? More importantly, how can they avoid fragmentation in their efforts?

Setting goals and standards along with isolated professional development activities will not do it alone. A systematic, systemic, and consistent framework *and high technology tool* is needed to bring these ideas into the classroom.

The Battle

Talk with educators today and you'll find they're facing challenges to:

- Determine industry endorsed performance expectations
- Assure that teaching and learning focus on intended results
- Increase accountability for what is taught and for what students learn
- Design instruction that is integrated and applied to real world problems
- Teach students knowledge; then teach them how to use knowledge
- Develop plans for work-based learning that builds on school-based learning
- Provide common philosophy, language, and standards for articulation
- Infuse standards throughout the curriculum
- Document learning results
- Provide staff development to prepare teachers and staff
- Move from teaching-centered organizations to learning-centered organizations

These aren't easy victories, but one state's public school system has found powerful ammunition in their attempt to bring about these changes and show proof of their attempt.

Back in 1990, the two year college system in Wisconsin (the Wisconsin Technical College System) searched for a software tool to bring about these changes, but those available were either too cumbersome, expensive, or user-unfriendly. So in June of 1992, the colleges formed a partnership with the Wisconsin Technical College System Foundation and the Wisconsin Technical College System Board to develop a high technology instructional design software package and video course that would arm them and Wisconsin K-12 school districts for the challenges ahead.

The result was a *system*--model, software, video course, and training--that works for teachers, administrators, and most importantly, learners.

The Model as a Battle Plan

The model behind the system integrates current theory and practice in instruction into a practical model that makes sense. Featuring critical elements of performance-based design, the model infuses broad, transferable skills (skills like communication, problem-solving, and critical thinking) into occupational and discipline specific instruction. Flexibility within the model makes it adaptable to varied instructional intents and missions--both academic and technical.

Emphasizing results, the model recognizes three performance levels. Broadest are the transferable skills that all learners need regardless of occupational or life roles. At the next level, competencies describe major discipline or occupationally specific skills. Each competency is clarified by performance standards specifying criteria and conditions for assessment. Learning objectives are the enabling instructional outcomes. They describe the lower level, supporting knowledge, skills, and attitudes needed to master a given competency.

After setting goals—"what", establishing criteria for determining "when", teachers or designers plan strategies for "how". These questions serve as a guide through a logical process which leads to effective teaching and learning. In line with strategic planning, the model guides teachers and designers to design from the inside out. In other words, what they intend to achieve drives how they approach the task.

From the learner's point of view, however, learning moves from the outside in. The learners begin with the "how" and aim for the "what" like a target. The model requires teachers to provide learners with precise information about performance expectations at the beginning of a learning experience. As a result, learners set out with a clear vision of the requirements for successful completion.

The Software as a Weapon

So you've chosen your model and are set for the challenge. What can you use to bring your ideas into the classroom? There must be a weapon. A tool. In this case, software. With the increasing number of computers available at both schools and homes today, teachers have an efficient medium by which to work.

The Wisconsin Technical College System Foundation developed software--designed by teachers, trainers, and curriculum specialists and used by individuals or collaboratively by groups, to develop and plan programs, courses, or lessons from scratch or from broad frameworks developed at the national, state, or district levels. It is compatible with the national DACUM and SCID curriculum development systems.

This proven tool creates study guides and training manuals that include the components of the model, analysis of instructional design, and infusion of broad transferable skills into learning plans and

assessment. It also supports the development of performance assessment tasks, personalized course syllabi, articulation plans, along with DACUM and program task lists. It is performance-based, user friendly, and learner-focused.

The Push to Implement K-12 Standards in Wisconsin

Curriculum revision and standard implementation efforts have been strong in this state. Since the release of the Wisconsin Model Academic Standards in December of 1997, and the expected release of more in September of 1998, over 250 K-12 school districts use the model and software to show how they address standards. Teachers use the model of instructional design to prove they are adopting state standards or developing their own. As they go through the design process, they refer to the state standards, either on paper or disk. They compare their competencies and performance standards to those in the state standards. The software offers them the opportunity to link specific standards to competencies--this in turn validates meeting the standard. Mary Kay York, K-12 Trainer in the Instructional Design and Planning Division of the Wisconsin Technical College System Foundation says what's important is that teachers "go through the design process and determine what is best for them in the classroom." She says this isn't easy, since they are "under the gun to meet the standards and can lose personal curriculum design." Mary Kay says it's her job as a facilitator to ensure that teachers are designing projects that meet the standards—projects that are useful in the classroom and "personalized" for each teacher. The software provides the flexibility to make this possible. "That's the beauty of it," she says. The beauty of the K-12 educational system in Wisconsin is that instructional designers are willing to work within the realm of the district and the state to *solve the needs of the classroom teacher*. Bob Boone, a middle school science teacher in Menomonie, Wisconsin says, "This system brings curriculum writing and classroom teaching together like nothing I've used before. To have curriculum stored in a flexible, usable format is a great advancement." Bob recently went through a workshop offered by the Technical College System Foundation; these 4-day trainings are often used as the first step in full school-wide implementation.

The Video Course as Added Power

Not all teachers are the same. They come from different backgrounds with different practices and even different terms for the same idea. How can schools cost-effectively provide instructional design training to hundreds, even thousands of professionals? And how can those in training get credit for it? The system comes with an Instructional Design and Planning video course that leads viewers through a step-by-step process for developing performance-based curricula, study guides, lesson plans, and teacher manuals. Thirteen video lessons and interactive study guides make viewers active learners as they apply what they learn to the design of their curriculum. Computer graphics and interviews with educators and

business leaders clarify and enliven the lessons. It is a powerful reference tool for those using the software or just beginning in the model. It has been thought of so highly in Wisconsin that several universities have offered it for two *graduate* credits.

Gaining New and Improved Ground

The designers of the project are committed to using quality principles, basing the design of the model, software, and video course on ideas from frontline educators and trainers. A Statewide Advisory Team, made up of curriculum specialists and faculty representatives from K-12 schools, all sixteen technical colleges, and business/industry, spear-headed much of the initial design work.

User teams from partner organizations review all software updates before release, providing constant feedback to the Project Design Team.

Teachers and trainers outside this Wisconsin college system are just beginning to recognize the power and broad applicability of what has been labeled the Wisconsin Instructional Design System, or WIDS. Besides heavy use in the Wisconsin K-12 districts, WIDS is being used by numerous two-year colleges, universities, and businesses in at least twenty-one states and five foreign countries.

It's definitely something I'd want on my side.

* * *

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